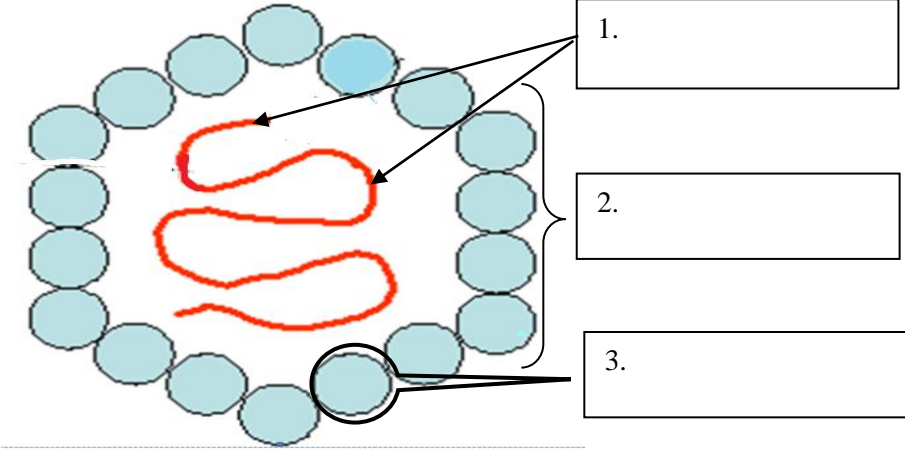


№	ITEMS	Score	
Diversity in the living world and evolutionary characteristics of the living world			
1.	<p>a) <i>Fill in</i> the blank spaces with the names of the structural elements of simple viruses.</p>  <p>1. <input type="text"/></p> <p>2. <input type="text"/></p> <p>3. <input type="text"/></p> <p>b) Classify viruses according to hereditary material.</p> <pre> graph TD A[Viruses] --> B[] A --> C[] </pre> <p>c) Name a common feature of viruses with living organisms (A) and a common feature of viruses with inorganic matter (B).</p> <p>A. _____</p> <p>_____</p> <p>B. _____</p> <p>_____</p>	L	L
		0 1 2 3 4 5 6 7	0 1 2 3 4 5 6 7

2. Analyse the image " The life cycle of viruses ".
 a) Complete the diagram below with the virus multiplication steps.

1. Fixation (attachment)

2.

3.

4. Self-assembly of viral components

5.

The diagram illustrates the life cycle of a virus within a host cell. It shows a virus (1) entering the cell (2), injecting its genetic material (3), which can be either DNA (ADN Viral) or RNA (ARNm). The genetic material then undergoes replication and transcription (4) to produce new viral components, which then assemble into new viruses (5) that exit the cell.

L

0

1

2

3

4

L

0

1

2

3

4

b) Write the name of the viruses that kill bacteria cells.

3. a) In column A the groups of pathogens are indicated, while column B shows example of diseases which they produce. Write in the provided space A the corresponding numbers from column B. The numbers can be used only once.

A	B
Bacteria _____	1. Smallpox (în română Variola); 2. Tuberculosis; 3. Herpes; 4. Cholera; 5. Dysentery; 6. Measles (în română Rujeola); 7. Warts (în română Negii).
Viruses _____	

b) Name an evolutionary feature of bacteria compared to viruses.

L

0

1

2

3

4

L

0

1

2

3

4

Vital systems and processes

4. Write in the space provided essence of the definition for the following terms:

Inspiration- _____

Immunity- _____

L

0

1

2

3

4

L

0

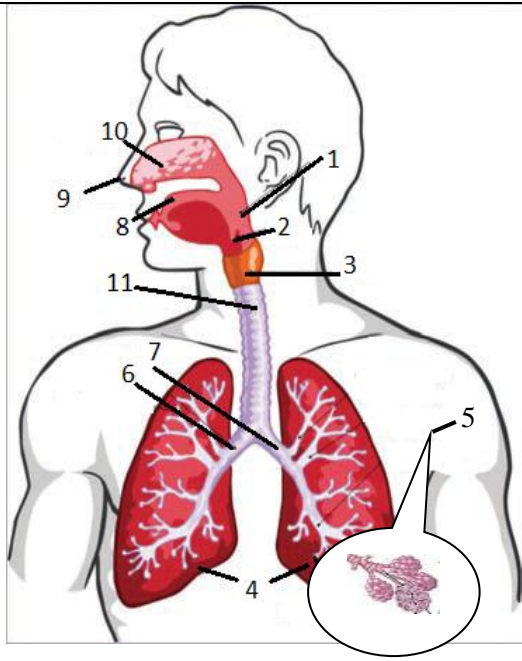
1

2

3

4

5. Analyse the image below.



a) Write the name of the organ system represented in the image belongs.

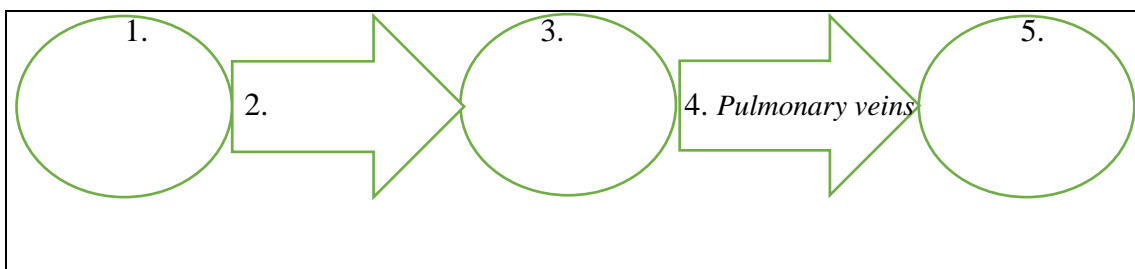
b) Indicate 6 structures for the identified system (optional).

c) Note a function of the structure indicated in the image by the number:

3. _____

5. _____

6. a) Fill in the blanks with the names of the anatomical structures to reflect the small blood circulation (pulmonary circulation).



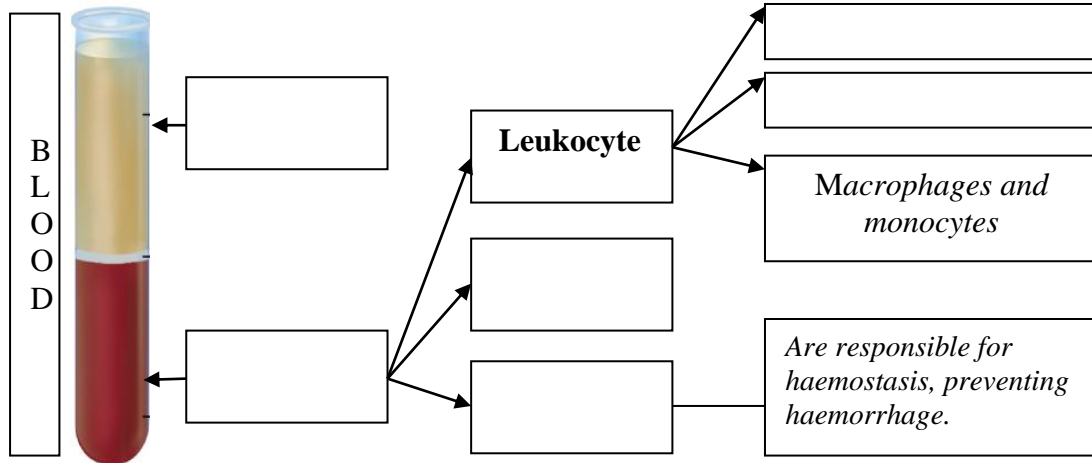
b) Name the type of blood flowing through the pulmonary veins.

c) Write the name of the blood protein that participates in the transport of oxygen.

L	L
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

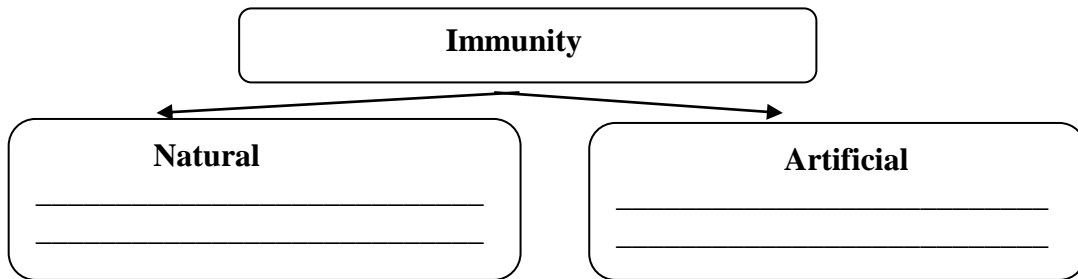
L	L
0	0
1	1
2	2
3	3
4	4
5	5
6	6

7. a) Fill in the blanks in the schema below „*Blood composition*“.



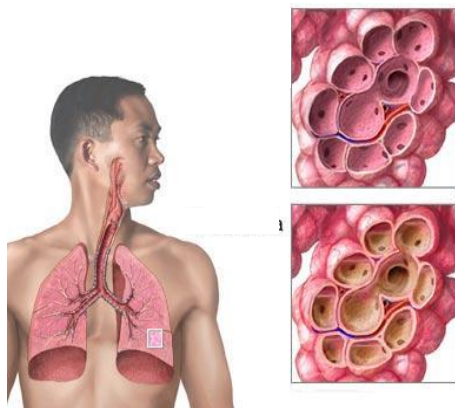
L L
0 0
1 1
2 2
3 3
4 4
5 5
6 6
7 7
8 8
9 9
10 10

b) Complete the scheme below with a feature of natural immunity and artificial immunity.



c) Write a PRO - vaccination argument.

8. The image shows a disease of the respiratory system, characterized by inflammation of the lung parenchyma. *Analyse the image.*



a) Name the pathology represented in the image:

b) Write a factor that facilitates the appearance of this disease:

Biological factor _____

Physical factor _____

Chemical factor _____

L L
0 0
1 1
2 2
3 3
4 4
5 5
6 6

c) Propose two methods of prophylaxis for this disease.

1. _____
2. _____

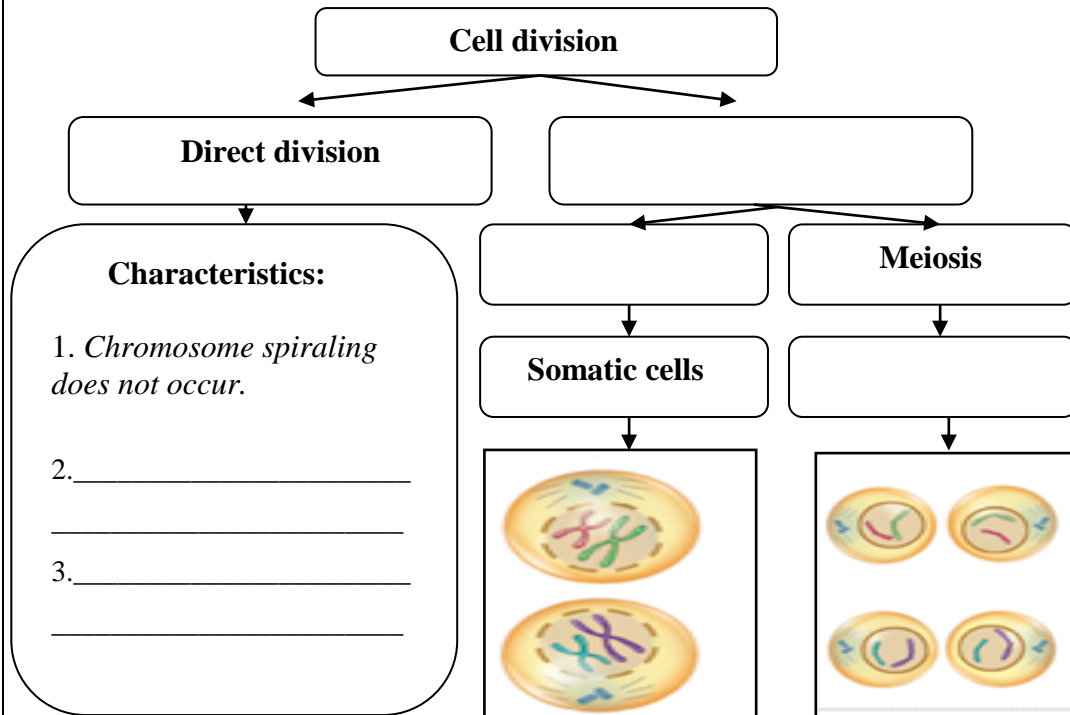
Basis of genetics and organism improvement/genetic engineering

9. a) Write the definitions for the following terms:

Replication - _____

Chromosome - _____

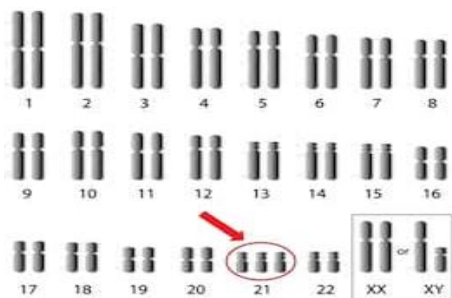
b) Complete the scheme below "Cell division".



L L
 0 0
 1 1
 2 2
 3 3
 4 4
 5 5
 6 6
 7 7
 8 8
 9 9

10. The karyotype of a sick person is shown in the image. Analyse the image.

I. Underline the correct answers in the statements below.

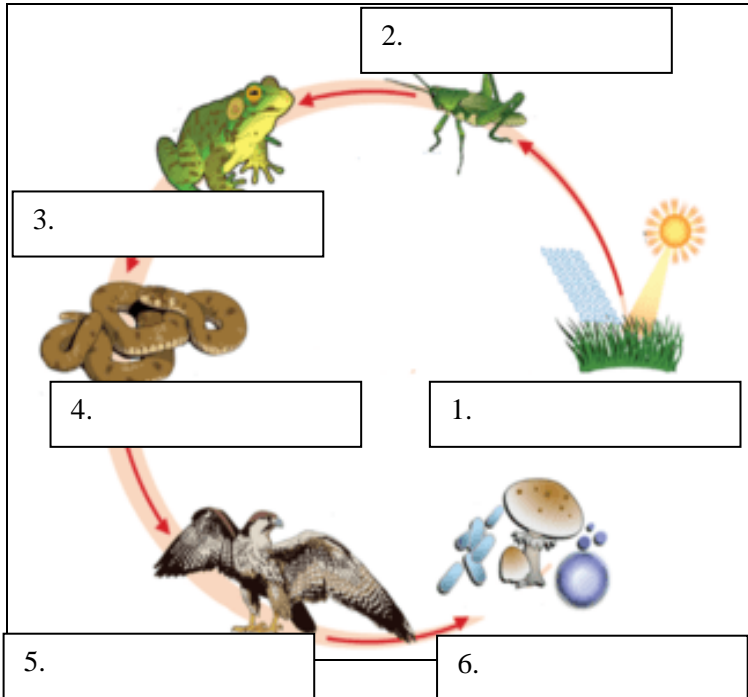



- a) **The picture represents the:**
Turner; Klinefelter; Down Syndrome.
- b) **Disease is:**
a monosomy, a trisomy.
- c) **The condition is:**
autosomal, heterosomal.
- d) **The mutation is:**
structural, numeric.

II. Name two clinical features of the syndrome identified in the image above.

1. _____
 2. _____

L L
 0 0
 1 1
 2 2
 3 3
 4 4
 5 5
 6 6

<p>13. <i>Analyse the food chain in the image below.</i></p> <p>a) Name the type of the food chain illustrated in the image:</p> <p>_____</p>	 <p>b) Fill in the blanks with the trophic function of each organism.</p> <p>c) Incircle one image with the organism that is part of the both aquatic and terrestrial ecosystems.</p> <p>d) Name the cellular organelle involved in the absorption and transformation of solar energy specific for organisms included in the trophic level 1.</p> <p>_____</p> <p>_____</p>	<p>L</p> <p>L</p> <p>0</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p>	<p>L</p> <p>L</p> <p>0</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p>
<p>14. The image below shows two localities that use energy sources obtained in different ways. <i>Analyse the image.</i></p>	 <p>Based on the image:</p> <p>a) Name the cause of the appearance of the greenhouse effect (represented in image A). _____</p> <p>b) Name two ecological sources of energy that would improve the condition of the environmental components.</p> <p>1. _____</p> <p>2. _____</p> <p>c) Write two consequences of water pollution.</p> <p>1. _____</p> <p>2. _____</p> <p>d) Present an argument in favor of creating green spaces in industrialized cities, for maintaining human health.</p> <p>_____</p> <p>_____</p>	<p>L</p> <p>L</p> <p>0</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p>	<p>L</p> <p>L</p> <p>0</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p>